

## PATENT ABSTRACTS OF JAPAN

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## (54) OPTICAL CIRCUIT

## (57) Abstract:

PURPOSE: To obtain the optical circuit which provide high distance resolution loss over a wide measurement distance range and generates a frequency- modulated light wave for light frequency band reflection measurement.

CONSTITUTION: A frequency shifter 12, an optical switch 13, and an optical amplifier 14 are connected in order to the output port OUT2 of an optical directional coupler 11, and the optical amplifier 14 is connected to an input port IN2 to form an optical loop circuit. An optical modulator 15 which modulates continuous light from a light source 16 into repetitive pulse light is connected to an input port IN1, and an external control system 17 synchronously controls the pulse signar outputted from the optical modulator 15 and the ON/OFF state of the optical switch 13 to obtain an external output from from output port OUT3.

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